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remains undeveloped. The anther cells are arranged not above one another as in other Lemnæ, but behind one another or obliquely lateral, as had been stated before. The filaments show spiral vessels, especially visible in the connective.

The ovules he finds single or in twos, (in the Detroit plant they were always in twos.

He then gives a minute account of the structure of the ovules and of the horizontal seed. The seeds are single, in one specimen only he found two immature but regularly developed seeds. In all the specimens examined they were covered with epidermis, and therefore smooth ; but he supposes that in a later stage the epidermis disappears and then the seed might have a ribbed appearance, much like the other Lemnæ in which the epidermis is more easily destroyed and thus the peculiar surface markings brought to light. The endosperm is thicker than in other Lemnæ—there is also a difference in the slit of the embryo.

In a systematic point of view the structure of the anthers would fortify the genus Spirodela, which altogether proves to be the most highly developed of all Lemnaceæ, if the second species of the genus, Spirodela oligorrhiza, should exhibit the same character ; but the flowers of this are to him unknown.

The number of ovules proves of little importance as a generic character. Not only that here one as well as two occur—he has now also become acquainted with a form from different parts of Australia, which, in most respects very similar to Lemna minor, shows regularly two ovules, and which on that account he had formerly thought to be allied to L. gibba, but which he now is inclined to consider distinct from both L. minor and L. gibba, and names *L. disperma.* G. E.

75. **Arceuthobium.**—We have received further particulars about this interesting discovery. Mrs. Millington writes, Nov. 23: "It seems curious that the plant I found should be so nearly the one I set out to find last April when I first saw the Nevada parasite. It occurred to me then that something of that kind might cause the unhealthy look and the decay of the Black Spruce, so well-known among the Adirondacks. Almost the first Abies that I had an opportunity to examine was literally covered with that curious growth, then quite small and without fruit. Some botanist, who has an opportunity to examine the *Abies balsamea,* might possibly find it infested with the same parasite. Many trees present the same appearance as the A. nigra when the parasite is present." Again, in a letter dated Dec. 12th, she writes : "I received a very interesting letter from Dr. Engelmann, and, to secure some winter specimens that we might study its habits more at large, I went myself to Warrensburg. I got specimens from twenty different trees, large and small. About 75 per cent of all the spruces were infested. Groups of large trees forty feet high were dead, and bore the peculiar marks of the parasite. Nothing but the depth of the snow (twelve inches) prevented my looking farther among the A. balsameæ, where I expect to find it yet. The location is on the east side of the plank road, two miles and a half from Warrensburg village, and half a

mile south of the toll-house. It is known as Dr. McNutt's Marsh, and is about 60 rods from the road."

"All the plants I send you are young ones: the question is, did they grow from this year's seed? You will, on examination, find tiny red points in the bark of this year's wood, and observe that the largest plants are in the older wood, and that none of them are the plants of last summer's growth."

76. **Note from Dr. Gray.**—Mr. Peck of Albany sent me, early last autumn, a good specimen of a parasite on *Abies nigra*, asking what it was. I replied that it was the female of an *Arceuthobium*, most likely *A. campylopodum* of Engelmann—to whom I advised he should send specimens; that the discovery was an interesting and unexpected one. As Dr. Engelmann seems to have been supplied with much smaller and less developed specimens than I was, I venture to suspect that he will yet conclude that it is his *A. campylopodum.*

The curious thing about the discovery is: 1st, that it should not have been detected before; 2nd, that it should, after all this overlooking, be found during the same season by two persons, in three different counties, and so abundant as to disfigure or even to destroy the trees it infests.

I did not answer your communication at once, because I knew that the plant had already been brought to the knowledge of the Torrey Club, and because I sent it at once, with the specimen, to Dr. Engelmann, who has only now returned it.

December 4th, 1871. A. G.

77. **Sesuvium.**—Mr. Merriam informs us that Dr. Gray has written him as follows: "No doubt your Sesuvium is S. pentandrum, and that *that* is a good species. I have no specimens of S. Portulacastrum from the Northern States. Equally I have *now* no doubt but that *S. sessile,* Nutt. (not DC.), is this *S. pentandrum,* as you say in the Bulletin."

78. **New Stations.**—**Erodium cicutarium,** L'Her.; Wallabout Swamp, on Nostrand Ave., Brooklyn, nearly opposite the hat factory.—**Lysimachia vulgaris,** L.; West Flushing.—**Pedicularis lanceolata,** L.; New Lots and Centreville, L. I.—**Origanum vulgare,** L.; Gowanus, Centreville, &c., L.I.—**Nicandra physaloides,** Gærtn.; Woodhaven, L.I. M. Ruger.

79. **Notes and Queries.**—I am desirous of obtaining peculiar forms of *Lechea,* especially from the south, and more particularly from Florida and the West Indies. I shall feel under much obligation to any one who will assist me by loan, exchange, or otherwise.

Wm. H. Leggett, 224, E. Tenth St., N. Y.

H. H. Babcock, 11, 18th St., Chicago, Ill., has for exchange plants from the vicinity of Chicago.

Those who have experience in the examination of plants would do a good service by imparting the results. What, for example, is the best mode of getting at an embryo enclosed in horny albumen?

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Local Herbarium, 3, E. 33d St.—Editor, 224, E. 10th St.